



SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

Engineering and Compliance Office

APPLICATION PROCESSING AND CALCULATIONS

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Minor Title V Permit Revision
Change of Condition
Section D (PO)
D12 Flow Coater

Legal Owner
or Operator:

SIERRACIN/SYLMAR CORP
12780 SAN FERNANDO RD.
SYLMAR, CA 91342

ID: 149814

Equipment

Location: 12780-82 SAN FERNANDO RD, SYLMAR, CA 91342

Equipment Description:

A/N 524740

Minor Title V Permit Revision (non RECLAIM)

SECTION D

Equipment	ID No.	Connected To	Source Type/ Monitoring Unit	Emissions * And Requirements	Conditions
Process 1: COATING					
COATER, PLANT 3, FLOW COATING ROOM, 13 W. X 17 L. X 21 H. (FEET), WITH ONE MILLIPORE FLOW COATING GUN, AND TWO 5-KW UV CURING SYSTEMS A/N: 462096-524739	D12			VOC (9) [RULE 1124, 9-21-2001; RULE 1171, 11-7-2003; RULE 1171, 5-1-2009]; VOC (10) [40CFR 63 Subpart GG, 12-8-200]	A63.1, A63.7, B27.1, H23.2, H23.7, K67.1, K67.2

History

The company manufactures clear acrylic military/commercial aircraft canopies and windows. Protective transparent films are flow coated on to these clear acrylic substrates inside clean rooms with a dedicated flow coater in each room. Coated parts are cured by either air dried, a portable IR-lamp curing bank, a portable UV-robotic curing system, or by a UV curing conveyor.

The existing D12 flow coater has been permitted under A/N 462096, with a VOC limit of not to exceed 36 pounds in any one day (Condition No. A63.1). In this project, the applicant is proposing to make the following changes to D12:

1. Adding Condition A63.7
2. Deleting Condition A63.1



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With Condition A63.7, the equipment will be subject to a VOC limit of not to exceed 30 pounds in any one day and the operator will be required to calculate VOC emissions based on total collection efficiency of 90% by weight. These changes will not result in any emission increases and will make the requirements consistent with another permitted flow coater, D57, at this facility.

The company is subject to a facility limit of 3510 pounds of VOC in any one month (Condition No. F2.1). It is also subject to a Rule 442 limit of 833 pounds of VOC in any one month (Condition No. F2.2).

A review of District compliance records indicates that the facility has had no citizen complaints filed, or Notices of Violation issued in the last two years. However, the facility was issued a Notice to Comply on 3/11/2011 requiring the applicant to submit corrected semi-annual monitoring report and annual compliance certification, and provide usage records of all coatings and solvents used at the facility. The facility provided all requested information and is currently operating in compliance with all applicable rules and regulations.

Process Description

Parts to be coated are manually placed inside a clean room, rested on a rack, which is equipped with a collection reservoir at the bottom to capture run-off flow coating materials. A continuous stream of liquid coatings is applied on parts using a Millipore flow coater. Only 10% of applied coatings stay on part. The remaining of 90% of applied coatings is run-off and collected in the reservoir. The collected run-off materials cannot be reused because of product quality concerns. At the end of each flow coating process, the run-off materials are transferred to a vapor tight storage container for later hazardous disposal.

Coated parts are allowed to cure by air drying. The following is the proposed operating schedule of the new flow coater:

<u>hr/dy</u>	<u>dy/wk</u>	<u>wk/yr</u>	
16	6	50	<-- <u>average</u>
24	7	52	<-- <u>maximum</u>



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ROG Emission Limits

The company is subject to a facility limit of 3510 pounds of ROG in any one month (Condition No. F2.1). It is also subject to a Rule 442 limit of 833 pounds of ROG in any one month (Condition No. F2.2). In this project, the equipment limit will be reduced from 36 to 30 pounds of VOC in any one day. Therefore, there will be no emission increase resulting from this project.

The company is proposing to accept a daily equipment VOC limit of 30 pounds so to be consistent with D57 flow coater. The requirement to calculate VOC emissions based on 90% collection efficiency of 90% by weight is for clarification purposes. The D12 flow coater was originally permitted with this collection efficiency.

Emission Calculations

Based on multiple tests conducted by the company and observed by a District representative on 7-25-03 & 8-27-03, the amount of run-off materials collected in reservoirs were determined to be ranging from 92.64% to 94.18% by weight. Therefore, an emission factor of 0.10 (1-90%) is used in the following equation to determine ROG emissions from flow coating and curing operations:

$$\text{ROG (lb/day)} = \text{Usage (gal/day)} \times \text{VOC (lb/gal)} \times 0.10$$

The applicant will be required to use the same emission factor of 0.10 in their calculations even though the actual flow coatings being recovered are greater than 90% (Condition No. A63.7).

The proposed change of permit conditions will result in an emission reduction, the following data will be entered in AEIS and NSR:

From previous engineering evaluation based on a permit limit of 36 lbs/day

For AEIS and NSR Data Entry:

$$\text{ROG (R1)} = 1.50 \text{ lb/hr}$$

$$\text{ROG (R2)} = 1.50 \text{ lb/hr}$$

$$\text{ROG (30DA)} = 0 \text{ lb/hr}$$

New Emissions based on a permit limit of 30 lbs/day:

For AEIS and NSR Entry:

$$\text{ROG (R1)} = 1.25 \text{ lb/hr}$$

$$\text{ROG (R2)} = 1.25 \text{ lb/hr}$$



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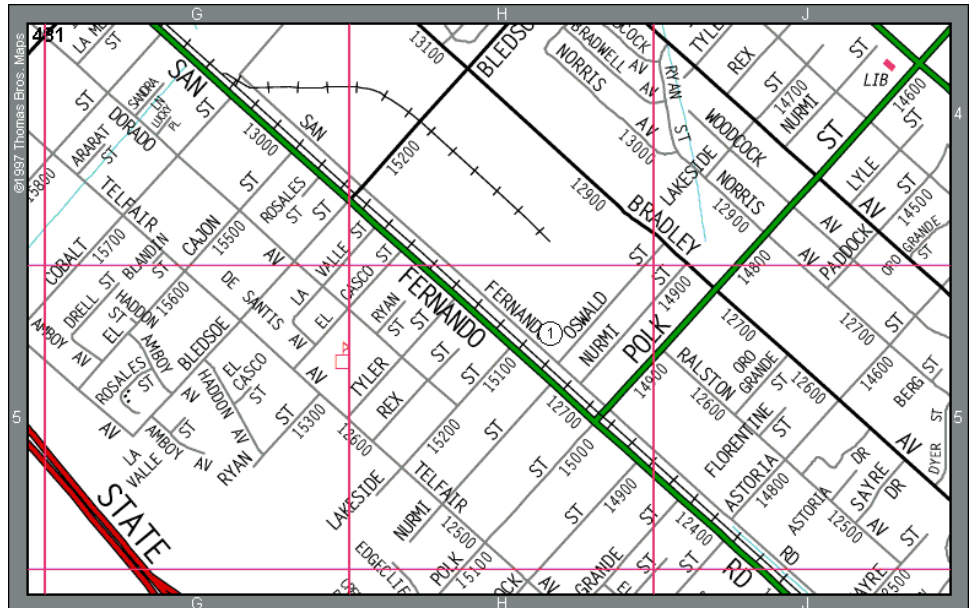
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ROG (30DA) = 0 lb/hr

Rule Evaluation

Rule 212(c)(1):

This section requires a public notice for all new or modified permit units that may emit air contaminants located within 1,000 feet from the outer boundary of a school.



Since no school is located within 1,000 ft, a public notice will not be required.

Rule 212(c)(2):

This section requires a public notice for all new or modified facilities that have on-site emission increases exceeding any of the daily maximums as specified by Rule 212(g).

	Maximum Daily Controlled Emissions					
	ROG	NO _x	PM ₁₀	SO ₂	CO	Pb
Total Increase (lb/dy)	0	0	0	0	0	0
MAX MDC Limit (lb/dy)	30	40	30	60	220	3
Compliance Status	Yes	Yes	Yes	Yes	Yes	yes

The above table summarizes the emission limits and increases. Since emission increases are less than the limits, a public notice will not be required.

Rule 212(c)(3):

There will be no increases in TACs. Therefore, a public notice will not be required.



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Rule 212(g):

This section requires a public notice for all new or modified sources that have equipment emission increases exceeding any of the daily maximums as specified by Rule 212(g).

The following summarizes the limit and MDC:

	Maximum Daily Controlled (MDC) Emissions					
	ROG	NO _x	PM ₁₀	SO ₂	CO	Pb
Per project	0	0	0	0	0	0
MAX MDC Limit (lb/dy)	30	40	30	60	220	3
Compliance Status	Yes	Yes	Yes	Yes	Yes	yes

No public notice is required since the MDC is not more than the limits.

Rule 401:

Visible emissions are not expected with the proper operation of the equipment.

Rule 402:

Nuisance is not expected with the proper operation of the equipment.

Rule 442:

Since the proposed coatings used are exempt from Rule 1124 VOC requirements, they are subject to Rule 442. The facility is subject to a monthly maximum ROG limit of 833 pounds in any one month from all emission sources that are subject to Rule 442. By complying with facility condition F2.2, the company is expected to be in compliance with this Rule.

Rule 1124:

Coatings used are exempt from Rule 1124(c)(1)(A) VOC content requirements per Rule 1124(k)(5) since coatings used at the facility are translucent and applied on transparent substrates.

IPA is used to clean miscellaneous polycarbonate substrates as surface preparation, in compliance with Rule 1124(c)(1)(A)—the VOC composite partial pressure is 31.5 mm Hg, less than 45 mm Hg.

Flow coater complies with Rule 1124(c)(4) transfer efficiency requirement of 65%.



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- Rule 1171: Acetone is used as application equipment clean-up solvent, in compliance with Rule 1171(c)(1)(C).
- Rule 1303(a): Since the proposed change of condition will not result in an emission increase, BACT requirements are not triggered.
- Rule 1303(b)(1): Further air quality modeling analysis will not be needed since emission increases are not expected from this project.
- Rule 1303(b)(2): Since the proposed change of condition will not result in an emission increase, external emission offsets will not be needed.
- Rule 1401: No TAC emission increases are expected from this project. Compliance with this rule is expected
- Reg XXX: The proposed project is considered as a Minor Title V Permit Revision pursuant to Rule 3000(b)(12) (A)(vi) since this project does not result in any increases in criteria pollutant emissions that are subject to Regulation XIII - New Source Review or a hazardous air pollutant (HAP).

Recommendation

The proposed project is expected to comply with all applicable District Rules and Regulations. Since the proposed project is considered as a "minor permit revision", it is exempt from the public participation requirements under Rule 3006(b). A proposed permit incorporating this permit revision will be submitted to EPA for a 45-day review pursuant to Rule 3003(j). If EPA does not have any objections within the review period, a revised Title V permit will be issued to this facility with the following proposed conditions:

Conditions:

Facility Conditions

F2.1 THE OPERATOR SHALL LIMIT EMISSIONS FROM THIS FACILITY AS FOLLOWS:



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CONTAMINANT	EMISSIONS LIMIT
VOC	LESS THAN OR EQUAL TO 3510 LBS IN ANY ONE MONTH

To ensure compliance with the monthly Volatile Organic Compound (VOC) emission limit(s) of this condition, the operator shall comply with the following recordkeeping requirements:

- (1) The operator shall comply with Rule 109 (Recordkeeping for Volatile Organic Compound Emissions).
- (2) Within 14 calendar days after the end of each month, the operator shall total and record VOC emissions for the month from all equipment and operations covered by the monthly emission limit(s). The record shall include any procedures used to account for control device efficiencies and/or waste disposal. It shall be signed and certified for accuracy by the highest ranking individual responsible for compliance with District rules.
- (3) The operator shall maintain a single list which includes only the name and address of each person from whom the facility acquired VOC-containing material regulated by the District that was used or stored at the facility during the preceding 12 months.
- (4) The operator shall retain all purchase invoices for all VOC-containing material used or stored at the facility, and all waste manifests for all waste VOC-containing material removed from the facility, for five years.

For the purpose of this condition, the VOC emission limit shall be from all equipment and operations that are required to have written permits or are exempt from written permits pursuant to rule 219.

F2.2 THE OPERATOR SHALL LIMIT EMISSIONS FROM THIS FACILITY AS FOLLOWS:

CONTAMINANT	EMISSIONS LIMIT
VOC	LESS THAN OR EQUAL TO 833 LBS IN ANY ONE MONTH

For the purpose of this condition, the VOC emission limit shall be from all equipment and operations that are subject to rule 442.

To ensure compliance with the VOC Volatile Organic Compound (VOC) emission limit(s) of this condition, the operator shall comply with the following recordkeeping requirements:

- (1) The operator shall comply with Rule 109 (Recordkeeping for Volatile Organic Compound Emissions).
- (2) Within 14 calendar days after the end of each month, the operator shall total and record VOC emissions for the month from all equipment and operations



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covered by the monthly emission limit(s). The record shall include any procedures used to account for control device efficiencies and/or waste disposal. It shall be signed and certified for accuracy by the highest ranking individual responsible for compliance with District rules.

Device Conditions:

A63.7 THE OPERATOR SHALL LIMIT EMISSIONS FROM THIS EQUIPMENT AS FOLLOWS:

CONTAMINANT	EMISSIONS LIMIT
VOC	LESS THAN 30 LBS IN ANY ONE DAY

The operator shall calculate the emission limit(s) in this device for coating usage based on total collection efficiency of 90 % by weight.

[Devices Subject to this condition: D12, D57]

B27.1 THE OPERATOR SHALL NOT USE MATERIALS CONTAINING ANY COMPOUNDS IDENTIFIED IN THE SCAQMD RULE 1401, AS AMENDED 12/07/1990.

For the purposes of this condition, compounds are those in Table I of the above mentioned rule, with an effective date of 12/07/1990 or earlier.

H23.7 THIS EQUIPMENT IS SUBJECT TO THE APPLICABLE REQUIREMENTS OF THE FOLLOWING RULES OR REGULATIONS:

CONTAMINANT	RULE	RULE/SUBPART
VOC	DISTRICT RULE	109
VOC	DISTRICT RULE	442

[Devices Subject to this condition: D4, D12, D13, D19, D44, D57, D60, D61, D62]

K67.1 THE OPERATOR SHALL KEEP RECORDS, IN A MANNER APPROVED BY THE DISTRICT, FOR THE FOLLOWING PARAMETER(S) OR ITEM(S):

Daily usage of coatings and solvents

[Devices Subject to this condition: D2, D4, D6, D9, D10, D11, D12, D13, D16, D19, D44, D53, D54, D60, D61]

K67.2 THE OPERATOR SHALL KEEP RECORDS, IN A MANNER APPROVED BY THE DISTRICT, FOR THE FOLLOWING PARAMETER(S) OR ITEM(S):

Material safety data sheets for all coatings and solvents used at this facility shall be kept current and made available to district personnel.

[Devices Subject to this condition: D4, D12, D13, D14, D15, D18, D19, D44, D55, D57, D60, D61]